



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,729	01/30/2004	Jay Proano	1875.5640000	6095
26111 7590 05/16/2007 STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER LUGO, DAVID B	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 05/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/767,729

Applicant(s)

PROANO ET AL.

Examiner

David B. Lugo

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1,4,5,12 and 15 is/are rejected.
- 7) ☒ Claim(s) 2,3,6-11,13,14 and 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/30/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4, 5, 12, 15 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Blanc et al U.S. Patent 6,990,418.

Regarding claim 1, Blanc discloses a method of monitoring the quality of a communications channel comprising receiving a data signal and establishing a zero reference phase of the data signal when a phase rotator position is set to its minimum value (col. 7, lines 35-38), phase shifting and sampling the data signal relative to the zero reference phase as sampler 514 is controlled by phase rotator 504 to generate $n \times p$ sample values (col. 6, lines 56-59; Fig. 5), detecting bit errors in the phase shifted data signal and determining a communications channel quality measurement based on the detected errors by performing an XOR operation between the sampled signal and a shifted version of the sampled signal and an OR operation between the XOR result and a previous value stored in a register (col. 7, lines 39-45; see also col. 4, lines 36-40), where a “digital eye” characterizing the high-speed signal quality is obtained from the result (col. 6, line 65 to col. 7 line 1; col. 10, lines 9-11).

Regarding claim 4, the step of detecting bit errors comprises comparing the phase shifted data signal to a pattern signal in the XOR operation (col. 7, lines 39-45).

Regarding claim 5, Blanc further discloses that a request is received by a microprocessor to control the operation of generating the signal quality (col. 3, lines 39-45).

Regarding claim 12, Blanc discloses a method of monitoring the quality of a communications channel comprising receiving a data signal and establishing a zero reference phase of the data signal when a phase rotator position is set to its minimum value (col. 7, lines 35-38), phase shifting and sampling the data signal relative to the zero reference phase as sampler 514 is controlled by phase rotator 504 to generate $n \times p$ sample values (col. 6, lines 56-59, Fig. 5), detecting bit errors in the phase shifted data signal and determining a communications channel quality measurement based on the detected errors by performing an XOR operation between the sampled signal and a shifted version of the sampled signal and an OR operation between the XOR result and a previous value stored in a register (col. 7, lines 39-45; see also col. 4, lines 36-40), where a “digital eye” characterizing the high-speed signal quality is obtained from the result (col. 6, line 65 to col. 7 line 1; col. 10, lines 9-11), and reiterating the steps for a plurality of phase positions (i.e. number of phase positions = p) that are shifted relative to the zero reference phase (see col. 6, lines 62-65).

Regarding claim 15, the step of detecting bit errors comprises comparing the phase shifted data signal to a pattern signal in the XOR operation (col. 7, lines 39-45).

Allowable Subject Matter

3. Claim 20 is allowed.
4. Claims 2, 3, 6-11, 13, 14 and 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David B. Lugo whose telephone number is 571-272-3043. The examiner can normally be reached on M-F; 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David B. Lugo
Patent Examiner

5/12/07